

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Lake Erie Smelting Corp. Site - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #2
Interim Measures Complete (Final)(PJ)
Lake Erie Smelting Corp. Site
A24R
Buffalo, NY
Latitude: 42.8830155 Longitude: -78.8563906

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Date: 9/9/2016

Reporting Period: August 24, 2016 through August 31, 2016

1. Introduction

1.1 Background

Site Number:	A24R	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	8/16/2016	Start Date:	8/16/2016
Demob Date:	8/31/2016	Completion Date:	8/31/2016
CERCLIS ID:	NYN000206590	RCRIS ID:	
ERNS No.:		State Notification:	07/19/2016
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

An emergency Removal Action is warranted based on the release or threat of release of a hazardous substance. Concentrations of lead have been found above the EPA RML for residential areas. Lead is present in the 0-1 inch soil interval at concentrations up to 4,100 mg/kg and in the 12-18 inch interval at concentrations up to 76,000 mg/kg. Elemental correlation and pattern analysis of analytical data indicates that the former smelter is the source of elevated concentrations of lead in soils within the Towne Gardens apartment complex. A CERCLA removal action is warranted to mitigate the threat to public health or welfare posed by the presence of lead at the Site. The Site encompasses an apartment complex where sensitive populations, particularly children, have been observed playing and residing.

The PRP has voluntarily agreed to perform the actions necessary to address the immediate concerns found at the Site. This removal action is considered a "PJ"; a PRP Emergency Removal with No Enforcement Instrument. As such, EPA will provide oversight of the clean-up operations and mobilize an OSC to the Site.

1.1.2 Site Description

The United States Environmental Protection Agency (EPA) Region II Removal Action Branch (RAB) was requested to conduct a Removal Site Evaluation (RSE) at the Lake Erie Smelting Corp. Site (Site) by the EPA Special Projects Branch (SPB) Pre-remedial Section. The EPA SPB Pre-remedial Section screened the Site in October 2014 and as of April 7, 2015, recommended a "No Further Remedial Action Planned" (NFRAP) determination. The NFRAP determination signifies that no additional remedial steps will be taken to list the Site on the National Priorities List (NPL) unless new information warranting further Superfund consideration or conditions not previously known to EPA regarding the Site are disclosed.

The Site was included on a list of hundreds of locations nationwide where secondary lead smelting or alloying may have been conducted between 1931 and 1964, according to entries in historical trade publications. The list was originally compiled by William P. Eckel in a doctoral dissertation for George Mason University, and the research was summarized in the article entitled, "Discovering Unrecognized Lead-Smelting Sites by Historical Methods" (Eckel et al, 2001). In total, 89 of the sites on this list are in New York State. The New York State Department of Environmental Conservation (NYSDEC) assessed the majority of these sites and ultimately referred 40 of these sites, including the Lake Erie Smelting Corp. Site, to EPA for further assessment.

Samples collected as part of the RSE indicate a release of lead and cobalt, both CERCLA designated hazardous substances, has occurred at the Site. Based on available information, a removal action is warranted to mitigate threats to public health or welfare or the environment associated with the release of hazardous substances.

The property located at 29 Superior Street was occupied by a junkyard owned and operated by Hyman Goldman in 1925. By 1930 the business changed names to Goldman and Sons junkyard. Goldman and Sons Smelter operated from approximately 1935 to 1940 and Lake Erie Smelting from 1941 to 1959. By the mid-1960s all businesses and residences had been removed and the area was leveled. Lake Erie Smelting moved operations to 127 Fillmore Avenue.

Lake Erie Smelting conducted secondary lead smelting operations at 29 Superior Street. Secondary lead smelting is the recovery of lead metal and alloys from scrap, including lead-acid batteries, lead cable coverings, plumbing and wheel weights. The chief alloy recovered by secondary smelters was antimonial lead. In addition to batteries, sources of scrap potentially included Babbitt metal, which are a group of lead-tin-antimony alloys used as antifriction metals in wheel bearings. Secondary lead smelting produced a number of wastes that may have become environmental contaminants, including air emissions and solid waste. Concentrations of lead in soil near stationary smelting sources can be elevated and may persist in the upper 2 inches.

1.1.2.1 Location

The Lake Erie Smelting Corp. Site is the location of a former secondary lead smelter that occupied approximately 13,000 square feet at the historical address of 29 Superior Street in Buffalo, Erie County, New York. The facility was in operation from approximately 1935 through the mid-1960s. The smelter was surrounded by residential properties until the neighborhood was razed, leveled and redeveloped for residential apartment living. Superior Street was removed and no longer exists. The footprint of the former facility lies north of Clinton Street and west of Jefferson Street, within the Towne Gardens apartment complex. The footprint of the former smelter is now occupied by two residential apartment buildings.

The Town Gardens apartment complex is located at 440 Clinton Street (Tax Map ID: 111.15-1-3) and consists of 36 buildings on approximately 18 acres of land. With the exception of a rental office, all buildings are for residential use. Approximately 360 individual apartment units house nearly 600 people including infants, children, women of child-bearing age and the elderly. Due to available housing stock, there is capacity for an approximately 200 additional individuals. The housing units are surrounded by grass-covered lawns, concrete sidewalks and asphalt-paved parking lots. Towne Gardens is bounded to the south by Clinton Street, to the east by Jefferson Street and to the west by Hickory Street. Residential properties line all of these streets. Byrd and McNeely Way bound the property to the north, beyond which is a partially vacant shopping center and residential properties.

1.1.2.2 Description of Threat

Findings of the removal assessment field work indicate that there has been a release of CERCLA-designated hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), in several locations on and near the Site. The Site is a "facility" as defined under Section 101(9) of CERCLA.

It should be noted that because secondary smelter facilities typically only process a limited number of metals to generate specialized alloy products, rather than a wide variety of metals, it is characteristic for secondary lead smelter emissions to contain lead, antimony, tin and arsenic. Because the former smelting facility potentially utilized, manufactured, recycled or retort solder and battery plates, it is likely that any emissions related to the former operations at that facility would also include the constituents of these metals: copper, lead, antimony and tin.

The historic footprint of the smelter facility includes residential dwellings with soil that contains lead levels which exceed the EPA RML in every depth interval that was sampled. In the 12 sample locations at or near the footprint of the historic facility, lead was present in samples at concentrations up to 4,100 mg/kg in the 0-1 inch interval, up to 570 mg/kg in the 1-6 inch interval, up to 7,400 in the 6-12 inch interval, up to 76,000 mg/kg in the 12-18 inch interval and up to 10,000 in the 18-24 inch interval. In addition, elevated concentrations of cobalt were detected in samples collected at or near the former smelter footprint. Cobalt was detected at a concentration of 180 mg/kg in sample location SS010 in the 0-1 inch interval and 220 mg/kg in the 1-6 inch interval. Concentrations of cobalt were also detected at 220 mg/kg at location SS009 in the 6-12 inch interval. Exposed soil was observed throughout the Towne Gardens apartment complex during the September 2015 Site visit and sampling event. During the sampling event, children and other sensitive populations were observed walking, playing and sitting in bare soil throughout the apartment complex, including the footprint of the former smelting facility.

Direct contact with elevated levels of lead and cobalt within the upper 12 inches of soil may occur through common recreational activities, gardening and when children touch or dig into contaminated soil. Contaminated soil may be ingested or tracked inside the apartments on footwear or clothing. Soil may also be transported off-site when residents traverse the complex to go to the shopping center, stores, bus stops or school buses. In addition, contaminated soil may be disturbed and become airborne and available for inhalation as a result of gardening or recreational activities.

Contact with the contaminated soil, or inhalation of contaminated soil particles, may present a health risk to those utilizing the outdoor areas of the apartment complex, particularly young children. The effects of exposure to lead are the same whether it enters the body through breathing or swallowing. The main target for lead toxicity is the nervous system, both in adults and children. Lead is a cumulative poison where increasing amounts can build up in the body, eventually reaching a point where symptoms and disability

occur. Particularly sensitive populations are children and women of child-bearing age, because of the fetal transfer of lead. Cognitive deficits are associated with fetal and childhood exposure to lead. An increase in blood pressure is the most sensitive, adverse health effect from lead exposure in adults.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA's Pre-remedial Site files, which included a Pre-Comprehensive Environmental Response, Compensation and Liability Information System Screening Form for the Site as well as historic city directories and Sanborn maps, were reviewed as part of this RSE. In addition, an internet search for historic articles, maps and photographs was conducted, and historic aerial photographs and online Erie County property records were reviewed. On September 15, 2015, RAB conducted an initial Site reconnaissance. Exposed soil was observed throughout the apartment complex, including directly in front of apartment entrance areas. Vegetable gardens were observed in front of several apartments. School buses pickup and drop-off children along Clinton and Jefferson Streets, causing kids to traverse the apartment complex. Following school hours, children were observed playing the grassy areas, dirt patches, along the sidewalks and within the parking areas. Pregnant women and those of childbearing age were observed walking the grounds and relaxing on stoops. Elderly people were also observed relaxing in chairs outside and along the entrance stoops. People and children of all ages were observed to be playing, relaxing and picnicking outside throughout the morning and afternoon hours.

On September 22 and 23, 2015, EPA RAB collected samples to determine whether operations of the former smelting facility resulted in a release of Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") designated hazardous substances to the surrounding residential neighborhood at levels above EPA RMLs. Fifty-two soil boring locations were selected throughout the Towne Gardens apartment complex, including the location of the former smelter. A total of 260 grab soil samples were collected, including quality assurance/quality control samples. Samples were collected at the following five intervals in the upper two feet of soil within each boring: 0-1 inch, 1-6 inches, 6-12 inches, 12-18 inches and 18-24 inches below grade surface ("bgs").

From September 24 through September 26, 2015, all samples were field screened for metals, particularly lead, utilizing X-Ray Fluorescence ("XRF") technology. Each sample was screened a minimum of 4 times for a minimum of 60 seconds per screen. An average concentration of lead was calculated for each sample. Of the 260 samples that were field screened using XRF, 83 had average lead concentrations above the EPA RML of 400 mg/kg for lead in residential soil. The range of concentrations above 400 mg/kg was between 403 and 28,096 mg/kg. Of the 83 samples with average lead concentrations above 400 mg/kg, 38 of these samples are located in or near the former smelter footprint (defined as SS009-SS018, SS020 and SS023).

A subset of the samples screened using XRF were sent for laboratory analysis. Samples were selected based on lead average, distance from the former smelter footprint, and observed use by the residents. A total of 91 samples, from 43 locations, were submitted to the EPA Region 2 Laboratory for TAL Metals, plus tin, analysis.

The analytical results indicate that lead is present at levels above the applicable EPA RML of 400 mg/kg at varying depths in 32 samples from 19 locations. RMLs are generic, chemical-specific concentrations for individual contaminants that may be used to support the decision for EPA to undertake a removal action. A lead level of 1,200 mg/kg is also utilized for comparison within the Superfund Lead-Contaminated Residential Sites Handbook to describe an urgent threat or an acute risk. All sampling results were compared to the respective EPA RMLs. All sample locations and the associated lead results exceeding the EPA RML by depth are depicted in Attachment A.

A total of 28 samples, from 12 locations in or near the former smelter footprint, were identified for sample collection and laboratory analysis, SS009-SS018, SS020 and SS023. Lead was detected at concentrations greater than 400 mg/kg in a total of 17 samples, representing 11 out of the 12 locations. Concentrations of lead within the former smelter footprint were detected between 660 and 76,000 mg/kg. In the 0-1 inch interval at location SS016, concentrations of lead were detected at 4,100 mg/kg. Lead was detected in the 1-6 inch interval, at 570 mg/kg, from sample location SS018. Lead was detected at a concentration of 7,400 mg/kg within the 6-12 inch interval at location SS011. All other lead exceedances were detected in the 12-18 or 18-24 inch intervals.

Lead was detected at concentrations ranging from 540 to 2,200 mg/kg in a total of 8 samples, from 5 locations west of the former smelter footprint, SS041, SS046, SS048, SS049 and SS052. Elevated concentrations of lead were found in samples from 3 locations east of the former smelter footprint, SS005, SS006 and SS019. At these locations, a total of 5 samples had lead concentrations detected between 470 and 4,700 mg/kg. All samples collected south of the former smelter footprint had concentrations of lead below the 400 mg/kg threshold.

In addition to the elevated lead detections, there were 4 antimony detections, 1 copper detection and 11 cobalt detections that exceeded the respective EPA RML. All exceedances of the antimony EPA RML of 94 mg/kg were from locations within the footprint of the former smelter, SS012 – SS014 and SS018 at intervals of 12-18 and 18-24 inches bgs. Concentrations of antimony exceedances were detected between 130 and 2,700 mg/kg. All exceedances for cobalt and copper were located outside of the former smelter footprint. With the exception of location SS034, cobalt exceedances were found in samples located downwind of the former smelter footprint, at locations SS001-SS003, SS009 and SS010. All exceedances of the cobalt EPA RML of 70 mg/kg were found within all interval depths at these locations and detected between 95 and 220 mg/kg. Copper was detected in one sample at a concentration in excess of the EPA RML of 9,400. This was in the 1-6 inch interval at location SS019 which is located to the east and downwind of the former smelter footprint. No other metal detections exceeded EPA RMLs.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Elemental correlation analysis was utilized to assess whether any of the elevated detections could be related to the former smelter facility. This analysis determines whether contaminant detections are from a singular source, are characteristic of a release from the historic, former smelter facility or are a result of the presence of exogenous (i.e., non-native) fill material. The main premise of the analysis is that soil from the same parental material has similar elemental correlations which group together, whereas non-native fill material would show varying degrees of dissimilar elemental relationships and exhibit scattered, ungrouped distributions. Elemental correlation analysis was completed for the 12 locations that are in or near the

footprint of the former facility in addition to the upwind/downwind locations. This analysis indicated that there are strong correlations between lead, tin and antimony, as would be expected from historic smelting emissions, in numerous locations within or near the facility footprint and at several upwind and downwind locations.

In March 2016 EPA Risk Assessors reviewed the analytical data and noted several locations where immediate action was necessary to protect children from exposure to heavy metals, particularly lead, found at or near the surface. In July 2016 EPA discussed the findings with the property owner of the apartment complex. In finding ways to protect the tenants, an agreement was made for the property owner to implement interim measures in specified areas outlined by the EPA risk assessors as needing immediate action. The property owner selected a remedy of installing new sod in these locations. The interim measures were generated by EPA and reviewed by the Erie County Department of Health (ECDOH), New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC). All parties agreed that the installation of sod would provide an appropriate temporary measure while long-term strategies can be developed.

2.1.2 Response Actions to Date

PRP cleanup activities commenced on August 16, 2016 and continued through August 31, 2016. The property owner placed a layer of earthen ground cover in the areas identified in the EPA generated *Recommended Interim Measures*. Sod was then installed over the dirt. In addition, a monitoring program was implemented to encourage development of the newly installed sod. Maintenance personnel water the areas daily and protective measures, such as temporary fencing, will be installed in attempts to keep residents off the sod. On August 31, 2016, following review of the interim measures implemented by the PRP, EPA determined that the emergency has been stabilized.

EPA activated a public awareness campaign for the residents of the Towne Gardens apartment complex in efforts to provide an awareness of lead exposure. On August 18th, an information packet containing an EPA generated fact sheet, ECDOH Info Sheet on Lead and an ATSDR ToxFAQs on Lead was delivered to all occupied apartments in the complex. In addition, on August 30th EPA held a public availability session for tenants and interested parties to learn of historical practices, sample results, immediate actions and long term goals. The availability session brought together various local, county and state agencies, elected officials and concerned parties.

An Action Memorandum (or equivalent) was not required for this voluntary PRP emergency removal since this response did not lead to action requiring Superfund activity under CERCLA 104(a) or an action whereby a PRP performs work under an Agency enforcement instrument.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

EPA has, and continues to identify PRPs for the Site. The current property owner is a PRP by default of ownership and has been working with EPA to provide an interim measure to limit exposure of contaminants. EPA is generating 104e Information Request letters to the current property owner, a successor company to Lake Erie Smelting Co. and the City of Buffalo. The City of Buffalo owned the property when redevelopment of the neighborhood took place around 1959. The smelting company moved operations when the City acquired the neighborhood and had all structures demolished and streets altered.

2.1.4 Progress Metrics

Approximately 1,425 square meters of land was covered with dirt and new sod.

Wastestream/Contaminant(s) of Concern	Medium	Quantity/Volume	Containment- Migration Control	Treatment	Disposal
Lead	Soil	Approximately 1,425 square meters	Land was covered with dirt and new sod.	N/A	N/A

2.2 Planning Section

2.2.1 Anticipated Activities

Long term measures are currently being developed to address the overall concerns associated with the finding of lead contaminated material. This PRP clean-up action was conducted under voluntary status in cooperation with EPA and additional agencies. EPA will continue to work with the PRP on addressing the long term objectives.

2.2.1.1 Planned Response Activities

The property owner will continue to maintain the areas where sod has been installed. No additional EPA activities are anticipated under this PRP lead action. EPA will work with the property owner, and any other identified PRPs, on the long term strategies for addressing lead contaminated material found at depth.

2.2.2 Issues

It should be noted that the Towne Gardens complex has been in the media recently. Numerous tenant complaints of mold, water intrusion, lack of maintenance and poor housekeeping have received the ear of local political figures and HUD. In addition, reports of shootings in the complex have been the stories of media outlets in the Buffalo area.

2.3 Logistics Section

All logistics will be handled and monitored by the appropriate contractor or agency.

2.4 Finance Section

2.4.1 Narrative

2.5 Other Command Staff

2.5.1 Safety Officer

Safety will be everyone's responsibility. Contractors for the property owner will be responsible for their own personnel during the activities discussed herein.

2.5.2 Liaison Officer

The EPA OSC is performing the activities of a Liaison Officer. The OSC is coordinating operations between the property owner, Erie County Department of Health, New York State Department of Health and New York State Department of Environmental Conservation. The Community Involvement Coordinator is the primary point of contact for local elected officials.

2.5.3 Information Officer

Michael Basile is the designated Community Involvement Coordinator for the Site and can be reached at 716-551-4410.

EPA drafted a fact sheet and circulated it through the Agency and partner organizations prior to being finalized on August 18, 2016. On August 18th and 19th, the fact sheet was distributed to tenants residing in the Towne Gardens apartments. The fact sheet was accompanied with an Info Sheet, developed by the Erie County Department of Health, and the ATSDT ToxFAQs for Lead. In addition, EPA distributed the fact sheet to local and state elected officials. On August 30th EPA held a public availability session at a nearby church.

3. Participating Entities

3.1 Unified Command

Not activated for this project.

3.2 Cooperating Agencies

EPA, NYSDEC, NYSDOH, ECDOH

4. Personnel On Site

Towne Gardens & Contractors: 6

EPA: 1

5. Definition of Terms

Definition of Terms

Assisting and Cooperating Agencies - Agencies who are assisting the EPA response, but are not a part of Unified Command.

E Goods - Electronic machines which contain hazardous components. Emergency Response - any activity undertaken by the Operations Section which mitigated an immediate threat to human health or the environment.

FRP - Facility Response Plan. Under the Clean Water Act, as amended by the Oil Pollution Act, a plan for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge, of oil. Required by certain facilities that store and use large quantities of oil.

Household Hazardous Waste - Small quantity waste from households that contain corrosive, toxic, ignitable, or reactive ingredients is hazardous. This includes pesticides, paint, solvents, etc.

Hazardous Debris - Debris which contains compounds that make it inappropriate for municipal landfill disposal

Monitoring - Using equipment which will give limited real-time information about constituents in environmental media. This method is used most often for air and water testing.

RCRA - Resource Conservation and Recovery Act.

RMP- Risk Management Plan. Under the Clean Air Act, certain facilities with large quantities of toxic potentially air born chemicals whose releases may impact human populations are required to submit to EPA a plan for hazard assessment, prevention, and emergency response.

Sampling -The process of taking environmental media for analysis at a laboratory of its constituents. These tests may require multiple days to complete, but test for a wider array of constituents than monitors.

Small Container - any container with a potential capacity of less than 5 gallons.

TRI - Toxic Release Inventory - A publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

Unified Command - A structure based on the Incident Command System (ICS) that brings together the Incident Commanders of all major organizations involved in the incident in order to coordinate an effective response, while at the same time allowing each to carry out their own jurisdictional, legal, and functional responsibilities.

White Goods - Large home electronics such as refrigerators, washing machines, and dryers.

WW - Wastewater Treatment Facilities

6. Additional sources of information

6.1 Internet location of additional information/report

www.epaosc.org/LakeErieSmelting

It should be noted that this website is secured and access is only for EPA personnel. Pollution Reports are not available through the public portion of this website.

6.2 Reporting Schedule

No additional Pollution Reports will be generated as the interim actions have been implemented.

7. Situational Reference Materials

www.epaossc.org/LakeErieSmelting